

Work Order ID 8-265-1

July-11-12 12:48:59 PM

\*87265\*

Page 1

Item ID: D6101-005

Revision ID:

Item Name: Saddle Billet

Start Date: 7/10/12

Start Qty: 60.00

Required Date: 8/10/12

Req'd Qty: 60.00

\*60\*

\*60\*

Reference:

Approvals:

Process Plan:

QC:

Date: 2-07-12

Date:

Tooling:

SPC (Y/N):

Date:

Date:

\*N9000040100\*

Setup Start

\*NS1\*

Stop

\*NS2\*

Cust Item ID:

Customer:

Run Start

\*NR1\*

Stop

\*NR2\*

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

D6101

Rev B

0.00

0.00

100

\*100\*

Purchasing

Purchasing

PURCHASING

Memo

Issue P/O:

a) Description: Alluminum billet

b) 5.00" x 8.250" x 2.50" thick

c) Tolerance on all dimensions are +0.030"/-0.000"

d) Grain direction along 5.00" length

e) Material: 7075-T7351 (QQ-A-250/12)

f) Material certification required

Receive & Inspect for Damage & Mat'l Certs

0.00

0.00

Memo

Ensure material certification is attached

110

\*110\*

Packaging

Packaging

CX 12/07/17 (60)

12/7/29 (30)



# Work Order ID 87265

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\*87265\*

Page 2

Item ID: D6101-005

Revision ID:

Item Name: Saddle Billet

Start Date: 7/10/12

Start Qty: 60.00

Required Date: 8/10/12

Req'd Qty: 60.00

Reference:

Accept

\*N900040100\*

Setup Start

\*NS1\*

Stop

\*NS2\*

Cust Item ID:

Customer:

Run Start

\*NR1\*

Stop

\*NR2\*

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

120

\*120\*

QC

Quality Control

QC6- Inspect dimensions to drawing

0.00

Memo

Ensure Material certification comply to Dwg D6101

0.00

DAS  
14  
2-83

12/07/26

30

130

\*130\*

Packaging

Packaging

Identify as per dwg & Stock Location: MAT44

0.00

Memo

0.00

DAS  
14  
2-83

12/07/26

30

140

\*140\*

QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

MCT 12/07/26

MCT 12/07/26





# Picklist Print

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Page: 1  
7

Work Order ID: 87265  
Parent Item: D6101-005  
Parent Item Name: Saddle Billet

Start Date: 7/10/12  
Start Qty: 60.00

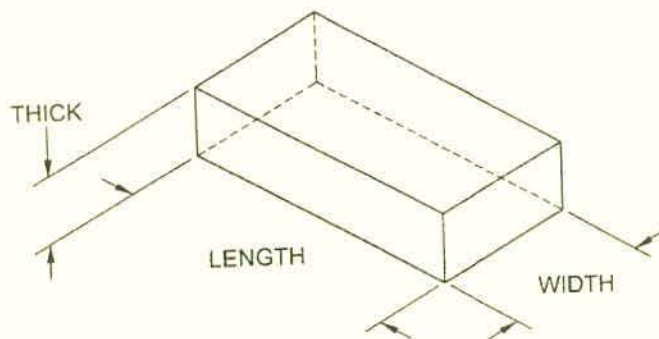
Required Date: 8/10/12  
Required Qty: 60.00

Comments: IPP A: 01.05.04New IssueEC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6101-005P 7075-T7351 8.25X5.0X2.5		Purchased	No			110	Each	0.0000	1	60		6/12/12	(30)

# SPECIFICATION CONTROL DRAWING

87265  
20120712



PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, LENGTH x WIDTH x THICK (+0.030/-0.000), AND GRAIN DIRECTION AS SHOWN.

TOLERANCES ON ALL DIMENSIONS ARE +0.030/-0.000.

ALL DIMENSIONS ARE IN INCHES.

△ B ACCEPTABLE SPECIFICATIONS FOR 7075-T7351 ALUMINUM ARE AMS-QQ-A-250/12, QQ-A-250/12, OR ASTM B209

Part No.	Alloy	Length	Width	Thick	Grain Direction
D6101-001	7075-T7351 (QQ-A-250/12)	6.000	6.250	2.000	Along 6.000 Length
D6101-003	7075-T7351 (QQ-A-250/12)	7.875	6.250	2.000	Along 7.875 Length
D6101-005	7075-T7351 (QQ-A-250/12)	5.000	8.250	2.500	Along 5.000 Length
D6101-007	7075-T7351 (QQ-A-250/12)	7.750	8.250	2.500	Along 7.750 Length
D6101-009	7075-T7351 (QQ-A-250/12)	8.700	8.250	2.500	Along 8.700 Length
D6101-011	7075-T7351 (QQ-A-250/12)	9.700	8.250	2.500	Along 9.700 Length
D6101-013	7075-T7351 (QQ-A-250/12)	10.100	8.250	2.500	Along 10.10 Length
D6101-015	7075-T7351 (QQ-A-250/12)	9.450	6.250	2.500	Along 9.450 Length
D6101-017	7075-T7351 (QQ-A-250/12)	6.350	6.250	2.250	Along 6.350 Length

RELEASED  
09/01/15/WB

B	ADDED D6101-015/-017, ADD ASTM B209	RF	09.04.23
A	NEW ISSUE	CP	01.03.30
REV.	DESCRIPTION	BY	DATE
DESIGN	CP	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>[Signature]</i>	D6101	SHEET 1 OF 1
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	SADDLE BILLET, 7075	NTS
DATE	09.04.23	COPYRIGHT © 2001 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE UNDERSTANDING THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	





**Castle Metals®**

A. M. Castle &amp; Co.

## BORDEREAU DE MARCHANDISES

Page 1 of 2

No de Formulaire d'Emballage / Shipment No: 1399396

<b>Expédié de / Ship From:</b> A. M. Castle & Co. (Canada) Inc. MONTREAL 835-SELKIRK AVENUE POINTE CLAIRE, QUEBEC H9R 3S2		<b>Vendu à / Sold To:</b> DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA		<b>Expédié à / Ship To:</b> DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CAN		<b>Livré à / Deliver To:</b> WILL CALL-MONTREAL 835 SELKIRK AVENUE POINTE CLAIRE, QC H9R 3S2 CA	
<b>Date d'expédition / Date Shipped</b> 23-JUL-2012	<b>F.O.B.</b> ORIGIN	<b>Modalités de transport / Freight Terms</b> Prepaid		<b>Transporteur / Carrier</b> MANITOULIN		<b>No du Bon de connaissance / BOL No</b> 1399396-2	

<b>Détails d'expédition / Shipment Details</b>	<b>Destination finale / Final Destination Branch - MON</b>
--	--

<b>N° de commande / Order No</b> 2268974	<b>N° de ligne / Line No</b> 1	<b>N° d'article / Item No</b> 752241.MO	<b>Description</b> 2.5000.PL.7075.T7351.ALUMINUM.US1.48.5000.144.5000 CUT 2SIDED TO 8.25 IN ( + .0310/- .0000 IN (GRAIN TO RUN ALONG 5")) X 5 IN ( + .0310/- .0000 IN (GRAIN TO RUN ALONG 5")) - ALUMINUM PLATE SAW SPECIFICATIONS: QQ-A-250/12	
<b>N° de bon de commande / Purchase Order No</b> WILL ADVISE 17464		<b>Nbre de pièces / Part Number</b> YOUR ITEM NUMBER: D6101-005	<b>Qté commandée / Ordered Qty</b> 30.00 PCS	<b>Qté Facturée / Invoice Qty</b> 30.00 PCS

DAS  
14  
283  
12/07/06

<b>Détails / Details</b> DO NOT SHIP - HOLD FOR RELEASE							
<b>N° de livraison / Delivery No :</b> 117753559	<b>Usine / Mill</b> KAISER ALUMINUM FABRICATED	<b>No de coulée / Heat Number</b> 489754a2	<b>Code méc / Mech Id</b>	<b>Pièces / PCS</b> 30	<b>Largeur (Pouce) / Width (IN)</b>	<b>Longueur (Pouce) / Length (IN)</b>	<b>Qté expédiée / Shipped Qty(LBS)</b> 319.9681

Ces marchandises/technologies sont sujettes aux règlements de l'Export Administration et du département d'état des Etats-Unis. Si elles ont été/sont exportées, elles doivent se conformer à ces règlements. Toute modification du contrat de transport contraire aux lois des Etats-Unis est interdite.  
These commodities/technologies are subject to US Export Administration & US State Dept. Regulations and, if intended for export, were/are exported thereunder. Diversion contrary to US Law is prohibited.

Nous certifions par la présente que le matériel couvert par cette certification est conforme aux spécifications susmentionnées et aux exigences applicables pour le matériel, y compris toute spécification faisant partie de la description. Les rapports d'essai sont archivés pour fins de consultation. Toute requête concernant du matériel défectueux sera rejetée à moins qu'elle ne soit faite par écrit à A. M. Castle & Co, dans les 60 jours suivant la livraison. Le matériel coupé sur mesure ou coupé par le client ne peut être retourné pour crédit.  
We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specification forming a part of the description. Test reports are archived for consultation. Any request concerning defective material will be rejected unless it is made in writing to A. M. Castle & Co, within 60 days following delivery. Custom cut or customer cut material cannot be returned for credit.

These commodities/technology or software were exported from the United States in accordance with the Export Administration Regulations. Diversion contrary to US law prohibited.

Date Printed: 07/29/2012 09:15 PM





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A. M. Castle & Co.

BORDEREAU DE MARCHANDISES

Page 2 of 2

Trit reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned to credit.		
Ce matériel a été reçu et inspecté par: Reviewed by Authorized Castle Metals Representative:	Date:	Name:

## SHIP TO:

CASTLE METALS AEROSPACE  
4175 ROYAL DRIVE, SUITE 600  
KENNESAW, GA 30144

# KAISER ALUMINUM

Trentwood Works - Spokane, WA 99215

Phone: (800) 367-2586

## CERTIFIED TEST REPORT

Serial Number

4178525

## SOLD TO:

CAS AERO%AM CASTLE METALS  
ATTN: BOB OHR %ACCTS PAYABLES  
3400 NORTH WOLF ROAD  
FRANKLIN PARK, IL 60131

CUSTOMER PO NUMBER: 23917	WORK PACKAGE:	CUSTOMER PART NUMBER: 752241 AMC CA-15745		SHIP RUN/LOAD: 101681/11	GOV'T CONTRACT NUMBER:	
KAISER ORDER NO: 1089704	LINE ITEM: 1	SHIP DATE: 3-DEC-2009	ALLOY: 7075	CLAD: BARE	TEMPER: T7351	PRODUCT DESCRIPTION: Sawed Plate
WEIGHT SHIPPED: 7160 LB	QUANTITY: 4 PCS EST.	B/L NUMBER: 2025111	GAUGE: 2.5000 IN		DIAMETER/WIDTH: 48.500 IN	LENGTH: 144.500 IN

## Certified Specifications

AMS 4078/RevG  
ASTM B 209/Rev07  
BSS 7055/RevA  
DPS 4.713/RevAH  
GSS16100/RevG/Amd1

AMS-QQ-A-250/12  
ASTM B 594/Rev06  
CMMP 025/RevS  
EAC MS1011/RevE  
MMS 159/RevN

AMS-STD-2154  
BAC 5439/RevH  
CSTI 006/RevC  
GAMPS 9101/RevB  
PS 21211/RevK

Test Code: 4297

## Test Results

Lot: 489362A4 Cast 276

Drop 40

Ingot 2

(ASTM E8/B557)

(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	71.4 : 72.5 (492 : 500)	60.1 : 62.2 (414 : 429)	10.3 : 11.1

(ASTM E1004)

(EN 2004-1)

Conductivity %IACS :	40.0 Min	40.5 Max
(MS/M) :	23.2 Min	23.5 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.10	0.22	1.4	0.06	2.5	0.20	5.7	0.03	0.01	0.01	TOT 0.05



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DEC 07 2009





# KAISER ALUMINUM

Trentwood Works - Spokane, WA 99215  
Phone: (800) 367-2586

## CERTIFIED TEST REPORT

Serial Number  
4178525

Lot: 489754A2 Cast 276 Drop 27 Ingot 2

(ASTM E8/B557)  
(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	70.7 : 71.5 (487 : 493)	59.1 : 60.5 (407 : 417)	11.1 : 11.4

(ASTM E1004)  
(EN 2004-1)

Conductivity %IACS :	41.4 Min	42.7 Max
(MS/M) :	24.0 Min	24.8 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.11	0.20	1.4	0.05	2.5	0.20	5.5	0.03	0.01	0.01	TOT 0.05

### ALLOY LIMITS

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
7075 MIN	0.00	0.00	1.2	0.00	2.1	0.18	5.1	0.00	0.00	0.00	EACH	0.05
MAX	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.05	TOT	0.15

Aluminum Remainder

### TEST NOTES

7075-T7351 plate 3.501-4.000" thick, if  
ultrasonically inspected, meets requirements of CMMP025 per  
SDR CMMP025-KaiserT-3. 7075-T7351 plate 4.001-5.000" thick,  
if ultrasonically inspected, meets requirements of CMMP025  
per  
SDR CMMP025-KaiserT-2.

Metal represented by this test report was immersion  
ultrasonically tested from one side and meets the Class A  
and Class B requirements of all specifications referenced  
on this test report.



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### CERTIFICATION

KAISER ALUMINUM FABRICATED PRODUCTS, LLC (KAISER) HEREBY CERTIFIES THAT METAL SHIPPED UNDER THIS ORDER WAS MELTED IN THE UNITED STATES OF AMERICA OR A QUALIFYING COUNTRY PER DFARS 225.872-1(a), WAS MANUFACTURED IN THE UNITED STATES OF AMERICA, AND MEETS THE REQUIREMENTS OF DFARS 252.225 FOR DOMESTIC CONTENT. THIS MATERIAL HAS BEEN INSPECTED, TESTED, AND FOUND IN CONFORMANCE WITH THE REQUIREMENTS OF THE APPLICABLE SPECIFICATIONS AS INDICATED HEREIN. ALL METAL WHICH IS SOLUTION HEAT TREATED COMPLIES WITH AMS 2772. ANY WARRANTY IS LIMITED TO THAT SHOWN ON KAISER'S STANDARD GENERAL TERMS AND CONDITIONS OF SALE. TEST REPORTS SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF KAISER ALUMINUM FABRICATED PRODUCTS, LLC LABORATORY. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTIRE ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW. ISO-9001:2000 CERTIFIED.

BILL POYNOR, LABORATORIES SUPERVISOR

*Bill Poy*